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Claims

1. A rotary electronic display board apparatus, comprising:

a drive motor for rotating a rotary shaft at a predetermined speed;

5   a revolution solid connected to the rotary shaft, which rotates with a

predetermined turning radius;

an LED array arranged on the revolution solid;

an origin pulse generator for generating an origin pulse whenever the revolution

solid rotates once;

10   a line pulse generator for calculating a rotation period of the revolution solid using

the origin pulse, and generating a plurality of line pulses each having a period

corresponding to a division result value which is acquired by dividing the rotation period

of the revolution solid by the number of virtual areas separated along the turning radius of

the revolution solid; and

15   a controller for generating a control signal to selectively switch on or off the LED

array so that desired text and image data is displayed at each line pulse generation time.

2. The apparatus as set forth in claim 1, further comprising:

an LED drive for selectively switching on or off LEDs upon receiving the control

20   signal from the controller.

3. The apparatus as set forth in claim 1, wherein the LED array is composed of a

plurality of multi-color LED lines which are spaced apart from each other at a

predetermined angle on the basis of the rotary shaft.

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4. The apparatus as set forth in claim 3, wherein the LED lines are composed of red(R), green(G), and blue(B) —colored LED lines, respectively.

5. The apparatus as set forth in claim 3, wherein:

each angle among the LED lines is set to a specific angle indicative of a multiple of a predetermined angle corresponding to the division result value which has been acquired by dividing the turning radius of the revolution solid by the number of virtual lines.

6. The apparatus as set forth in claim 1, further comprising:

a memory for storing data of LEDs to be switched on or off on individual virtual lines so that the text and image data can be displayed.

7. The apparatus as set forth in claim 1, further comprising:

a brightness level controller for controlling a brightness level of individual LEDs contained in the LED array.

8. The apparatus as set forth in claim 1, wherein the controller further includes:

a DMAC (Direct Memory Access Controller) for reading data of LEDs to be selectively switched on or off on the virtual lines from a memory, and transmitting the read data to an LED drive.

9. The apparatus as set forth in claim 1, wherein the revolution solid is configured in the form of either one of a circle, curve, and a straight bar.

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10. The apparatus as set forth in claim 6, wherein the data is equal to specific data generated by controlling a brightness level of the LEDs.

11. A method for driving a rotary electronic display board, comprising the steps of:

a) generating an origin pulse whenever a revolution solid rotates once;

b) counting a rotation period of the revolution solid using the origin pulse;

c) generating a plurality of line pulses each having a period corresponding to a division result value which is acquired by dividing the rotation period of the revolution solid by the number of virtual lines separated along a turning radius of the revolution solid while the revolution solid rotates once; and

d) selectively switching on or off a plurality of LEDs at each line pulse generation time, and displaying text and image data.

12. The method as set forth in claim 11, wherein the step (a) for counting the rotation period of the revolution solid includes the step of:

counting a difference between a current origin pulse entry time and a previous origin pulse entry time so that the rotation period of the revolution solid can be recognized.